

AMENDMENTS TO THE CLAIMS

Listing of Claims

1. (Currently Amended) A method of treating a sample suspected of containing hepatitis C virus (HCV) to release HCV antigen and to inactivate antibodies that bind to the HCV antigen, which method comprises treating the sample with a treating agent containing:
 - (1) an acidifying agent,
 - (2) ~~an amphoteric surfactant~~ or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule,wherein the method effects the release of the HCV antigen and the inactivation of antibodies that bind to the HCV antigen.
2. (Withdrawn) A method of treating a sample suspected of containing HCV to release HCV antigen and to inactivate antibodies that bind to the HCV antigen, which method comprises treating the sample with a treating agent containing:
 - (1) an acidifying agent,
 - (2) an amphoteric surfactant or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule, andeither of the following (3), (4) and (5):
 - (3) a protein-denaturing agent, a nonionic surfactant or a reducing agent,
 - (4) a monosaccharide or a disaccharide, and
 - (5) citric acid or a citric acid salt,wherein the method effects the release of the HCV antigen and the inactivation of antibodies against the HCV antigen.

3. (Cancelled)
4. (Previously Presented) A method of detecting immunologically HCV in a sample suspected of containing HCV, comprising the steps of:
 - (1) treating the sample according to claim 1, and
 - (2) determining if HCV is present using a probe that binds to the HCV antigen.
5. (Previously Presented) A method according to claim 1 in which said acidifying agent is hydrochloric acid, sulfuric acid, acetic acid, trichloroacetic acid, trifluoroacetic acid, or citric acid.
6. (Cancelled)
7. (Previously Presented) A method according to claim 1 in which said cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule is decyltrimethylammonium chloride, dodecyltrimethylammonium chloride, tetradecyltrimethylammonium chloride, hexadecyltrimethylammonium chloride, decyltrimethylammonium bromide, dodecyltrimethylammonium bromide, tetradecyltrimethylammonium bromide, hexadecyltrimethylammonium bromide, lauryl pyridinium chloride, tetradecyl pyridinium chloride, or cetyl pyridinium chloride.
8. (Withdrawn) A method according to claim 2 in which said protein-denaturing agent is urea or thiourea.
9. (Withdrawn) A method according to claim 2 in which said nonionic surfactant is a polyoxyethylene isooctylphenyl ether, a polyoxyethylene nonylphenyl ether and a polyoxyethylene sorbitan alkylester.
10. (Withdrawn) A method according to claim 2 in which said reducing agent is cysteine, cysteamine, dimethylaminoethanethiol, diethylaminoethanethiol or diisopropylaminoethanethiol.

11. (Withdrawn) A method according to claim 2 in which said monosaccharide or disaccharide is maltose, sucrose, trehalose, mannose, fructose, glucose, sorbitol, galactose, or dextrose.
12. (Withdrawn) A method according to claim 2 in which said citric acid or citric acid salt is citric acid, citric acid hydrate, sodium citrate, or potassium citrate.
13. (Withdrawn) A diagnostic reagent or a diagnostic kit for treating a sample to detect HCV antigen, the kit comprising substances (1) and (2) in a treating agent:
 - (1) an acidifying agent, and
 - (2) an amphoteric surfactant or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule.
14. (Withdrawn) A diagnostic reagent or a diagnostic kit for treating a sample suspected of containing HCV to detect HCV antigen, the kit comprising substances (1) and (2) and at least one substance of the following (3) in a treating agent:
 - (1) an acidifying agent,
 - (2) an amphoteric surfactant or a cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule, and
 - (3) a protein-denaturing agent, a nonionic surfactant or a reducing agent.
15. (Cancelled)
16. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 13 in which said acidifying agent is hydrochloric acid, sulfuric acid, acetic acid, trichloroacetic acid, trifluoroacetic acid, or citric acid.
17. (Withdrawn) A diagnostic reagent or a diagnostic kit according to any claim 13 in which said amphoteric surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule is N-dodecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, N-tetradecyl-

N,N-dimethyl-3-ammonio-1-propanesulfonate, N-hexadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate, or N-octadecyl-N,N-dimethyl-3-ammonio-1-propanesulfonate.

18. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 13 in which said cationic surfactant having both a straight chain alkyl group of 10 or more carbon atoms and a tertiary amine or a quaternary ammonium salt in the same molecule is decyltrimethylammonium chloride, dodecyltrimethylammonium chloride, tetradecyltrimethylammonium chloride, hexadecyltrimethylammonium chloride, decyltrimethylammonium bromide, dodecyltrimethylammonium bromide, tetradecyltrimethylammonium bromide, hexadecyltrimethylammonium bromide, lauryl pyridinium chloride, tetradecyl pyridinium chloride, or cetyl pyridinium chloride.
19. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 14 in which said protein-denaturing agent is urea or thiourea.
20. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 14 in which said nonionic surfactant is a polyoxyethylene isooctylphenyl ether, a polyoxyethylene nonylphenyl ether or a polyoxyethylene sorbitan alkylester.
21. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 14 in which said reducing agent is cysteine, cysteamine, dimethylaminoethanethiol, diethylaminoethanethiol or diisopropylaminoethanethiol.
22. (Cancelled)
23. (Cancelled)
24. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 9 wherein the nonionic surfactant is Triton X-100 or Triton X-114.
25. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 9 wherein the nonionic surfactant is NP40.
26. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 9 wherein the nonionic surfactant is Tween 80.

27. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 20 in which the nonionic surfactant is Triton X-100 or Triton X-114.
28. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 20 in which the nonionic surfactant is NP40.
29. (Withdrawn) A diagnostic reagent or a diagnostic kit according to claim 20 in which the nonionic surfactant is Tween 80.